

## Features

- Formerly a JENSEN+DEVICES product
- Fast switching rate
- High energy, low loss capability
- Wide operating temperature range
- Long service life
- High insulation resistance
- RoHS compliant\*

## Applications

- Igniters for architectural and automotive Xenon discharge lamps
- Electronic igniters for gas heating and gas domestic appliances, e.g., cookers
- Ignition of ultra-high pressure gas discharge lamps for data and video projectors

# ST-1000 Series Sparctube™ Switching Spark Gap

## Description

Bourns® Sparctube™ Series is a range of switching spark gaps designed specifically for voltage controlled switching of capacitive discharge circuits where a high energy, low loss, fast rate of switching is required. This series is ideally suited for applications where a capacitive discharge is utilized with a transformer to obtain pulses of very high voltage levels in the order of several thousand volts.

## Characteristics

### Initial Values:

Static Breakdown Voltage @ 800 V/s <sup>1</sup>

First Ignition Values .....	< 1200 V
Following Ignition Values .....	1000 V ±15 %

### Electrical Life:

Minimum Number of Switching Cycles .....	2x10 <sup>5</sup>
Peak Current (Approx.) .....	400 A
Maximum Switching Frequency .....	400 Hz
<b>Breakdown Characteristics @ 1400 V Limit</b>	
First Ignition Values .....	≤ 1400 V
Delay Time .....	< 60 ms
Following Ignition Values .....	1000 V ±20 %

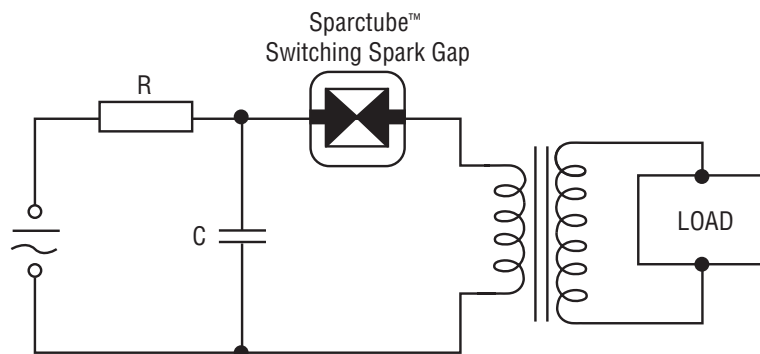
### General Data:

Breakdown Time .....	< 50 ns
Insulation Resistance @100 Vdc .....	> 100 megohms
Share of Early Ignition Values (< 800 V) .....	< 1 %
Capacitance .....	< 1 pF
Operating Temperature Range <sup>2</sup> .....	-40 °C to +160 °C
Storage Temperature Range .....	-65 °C to +125 °C
Weight (Approx.) .....	2.3 g
Testing .....	100 %
Robustness of Terminations .....	IEC 60068-2-21 <sup>3</sup>

### Notes:

- <sup>1</sup> At delivery AQL 0.65 Level II, DIN ISO 2859.
- <sup>2</sup> Distribution of switchings: maximum 20 % above +125 °C and 20 % below +20°C.
- <sup>3</sup> Test Ua1 (tensile), Ua2 (thrust), Ub (bending) and Uc (torsion).

## Basic Application Circuit



# BOURNS®

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### Europe:

Tel: +41-41 768 5555  
Fax: +41-41 768 5510

### The Americas:

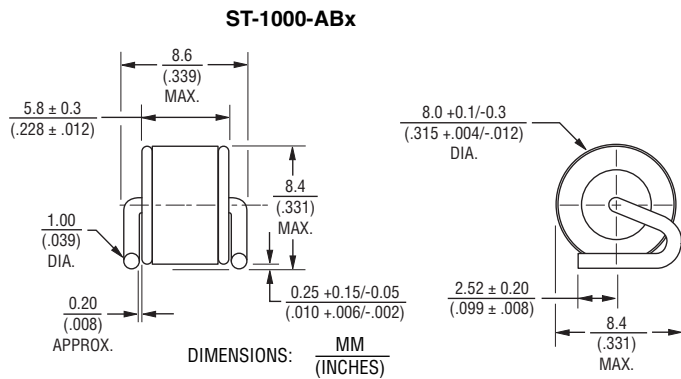
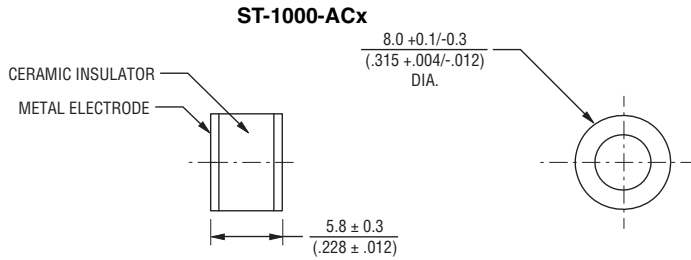
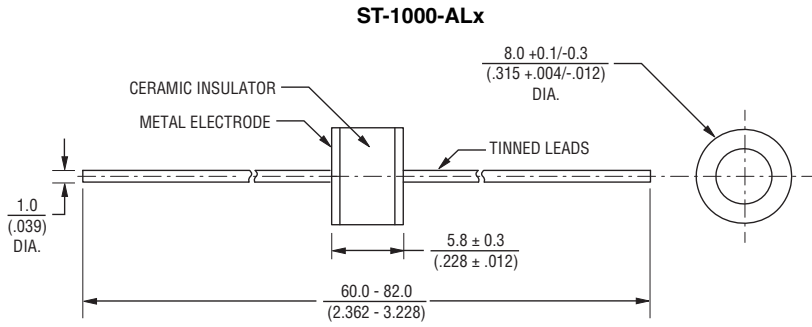
Tel: +1-951 781-5500  
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[www.bourns.com](http://www.bourns.com)

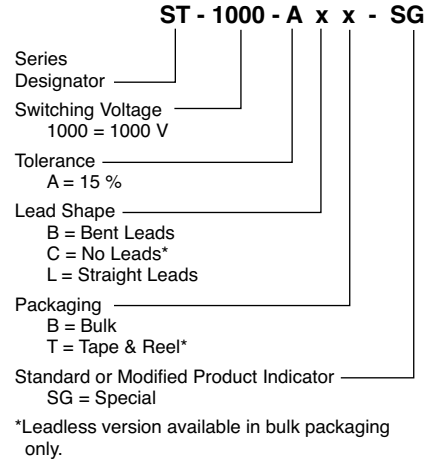
# ST-1000 Series Sparctube™ Switching Spark Gap

**BOURNS®**

## Product Dimensions



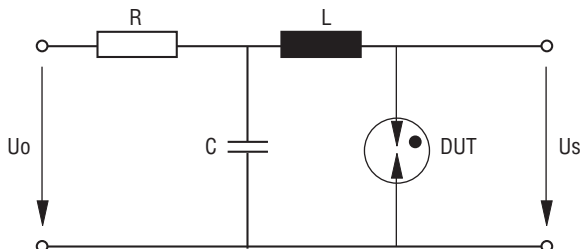
## How to Order



## Typical Part Marking

**B** ST 1000 wwy..... "wwy" = Week and year of production

## Test Circuit



$U_o$ .....1400 V  
 R.....See Note  
 C.....100 nF  
 L.....0.5  $\mu$ H  
 DUT.....Device Under Test  
 $U_s$ .....Breakdown Voltages

NOTE:  $U_o$  and R are set to provide suitable conditions for different measurements.

